

April 7, 2011

Dear Los Angeles County Board of Supervisors:

My staff and I reviewed the finding in the Inglewood Oil Field Communities Health Assessment, Bureau of Toxicology and Environmental Assessment, Los Angeles County Department of Public Health, February 2011". Our review focuses on the following aspects of the report: the soundness of the methods, the interpretation of the results and the acknowledgment of limitation.

Sincerely Yours,

Stephen Thacker

# CDC Review of Inglewood Oil Field Communities Health Assessment

## Introduction:

The Centers for Disease Control and Prevention (CDC) received a request from Los Angeles County (LAC) Board of Supervisors to review a report of a health assessment in the Inglewood Community of LAC. This evaluation is in response to this request.

## Background:

Although background information was not included, information on the web provided some background. Oil and gas exploration and production in the Inglewood Oil Field, Los Angeles County, California, date back to the 1920s. Current oil field operations include drilling, subsurface extraction of oil and gas, removal of impurities like water, hydrogen sulfide, and gas liquids (e.g. propane and butane), and shipping of crude oil and gas via pipeline to Southern California customers and refineries. Regional development has continued such that the Inglewood Oil Field is surrounded by residences, schools, commercial and other urban use properties (PXP 2009). In October 2008, the Baldwin Hills Community Standards District (CSD) was established to implement regulations, safeguards, and controls to monitor current and future site plans for drilling and extraction of oil and gas reserves. The Los Angeles County Regional Planning Director is authorized to enforce the CSD. The CSD monitoring and compliance requirements of the Environmental Quality Assurance Program are to be conducted by the oil field operator, Plains Exploration and Production Company (PXP) (LACBS 2008; PXP 2009a).

In February 2011, the Los Angeles County Department of Public Health (LACDPH) released a health assessment for the Baldwin Hills Community in response to health concerns voiced by community residents. To provide a health profile, this assessment reviewed health indicators arising among residents living within ~1.5 miles from the Inglewood Oil Field, by tracts or zip codes, and compared the rates to the total number in the Los Angeles County by age and race/ethnicity standardization. In summary, the LACDPH presented the following rates by years of available records: 1) 2000-2007 mortality; 2) 2000-2007 low-birth-weight births, 3) 1990-2002 birth defects, excluding 1998; and 4) 1972-1999 and 2000-2005 cancer (LACDPH 2011). Frequencies < 20 are suppressed.

## CDC review:

Overall, this seems to be a sound assessment of mortality, low birth weight, birth defects and cancers in the Inglewood community and the results appear to be valid. However in order to provide a more comprehensive review, additional information is needed. We need a better understanding of why these specific health outcomes were chosen for assessment. Also, the purpose of the study and how these results will be used is unclear. For example, while all cause and leading cause mortality analysis is informative, especially for resource allocation, it is not specific to exposures potentially associated with present and future Inglewood Oil Field drilling and extraction operations. In order to assess the appropriateness of the investigation, we need a better understanding of these issues and the context in which this community health assessment was conducted.

Given these limitations we do have some specific comments related to the soundness of methods, interpretation of results and limitations which are outlined below.

### **The soundness of the methods**

A strength of this analysis is that it takes advantage of readily available sources of health data. Several of the data sources used were comprehensive and complete. For example, mortality data, the electronic death registration system uses data from death certificates. This data source is 100% complete as death certificates are required to be filed under state law. The cancer registry for LAC, University of Southern California Cancer Surveillance Program (USC-CSP), has an estimated completeness of reporting to the registry of over 95%. In addition, The California Birth Defects Monitoring Program collects data from in-patient facilities, genetic offices and cytogenetic laboratories. Trained staff reviews all relevant records.

The analytic methods used were appropriate for a community health assessment. Comparison of health outcome rates in a community to the larger county rates is a standard method. One recommendation however is to limit the analysis to those health outcomes relevant to the objectives. As stated above the reasons for choosing these health outcomes were unclear.

### **The interpretation of the results**

Overall, LACDPH found that the rates of the health assessment indicators for the population living in the vicinity of Inglewood Oil Field were consistent with those for the county. This interpretation of the results presented in the report seems appropriate. However, as mentioned above the analysis seemed to combine several potential purposes and the objective was unclear. Thus although the interpretation of the analysis and results presented seem appropriate, it is difficult to determine if the correct analysis or data was used and therefore difficult to interpret the results. In addition, we recommend including some basic demographic characteristics about the population such as mean age, gender distribution, average income level, changes in population (In- and out- migration) and occupational sector in the results. This would be useful in interpreting the public health impact.

### **The acknowledgment of limitations**

The limitations acknowledged were correct however there are some additional limitations. Again, depending on the objective it may be important for several of the health outcomes assessed (birth outcomes, cancer) to know the length of time spent in the community.

### **Summary**

Thank for providing us the opportunity to review this community health assessment. We recommend obtaining the additional information requested above (clarification of objectives and purpose). We would be happy review the report again with this additional context.